

**In the Claims:**

1. (currently amended) A child car seat assembly, comprising:  
a child car seat, said child car seat being attachable in a seat of a vehicle, said  
child car seat having a safety belt means for securing a child;  
a seat cushion with pressure switch means formed in the seating area of said child  
car seat; said pressure switch means being enabled when a child occupies said  
child car seat; and  
signal wires from said pressure switch means routed out of said seat cushion, said  
signal wires having a mating connector for connecting to a vehicle occupant  
detection and notification system for use in notifying a person that a child is  
strapped in said child car seat in said vehicle, and  
a micro-controller unit for controlling a vehicle occupant detection and  
notification system, said micro-controller unit being installed on said child car  
seat by attaching means, said micro-controller unit being operable to monitor  
said micro-controller unit's inputs from said seat cushion and other sensor  
inputs of said vehicle occupant detection and notification system and to  
provide output enabling signals to internal and external vehicle alarms.
  
2. (canceled)

Application/Control Number: 10/658,954(Younse) Art Unit: 2636

12

3. (canceled)
4. (currently amended) A vehicle occupant detection and notification system for retrofitting into an existing vehicle, comprising:  
a child car seat, said child car seat being attachable in a seat of a vehicle, said child car seat having a safety belt means for securing a child, said child car seat further having a built-in seat cushion pressure switch means, said pressure switch means being enabled when a child occupies said child car seat;  
~~a controller unit for controlling said system, said controller unit being mountable in said vehicle, said controller unit determining when a child is in said child car seat and a passenger door of said vehicle is open;~~  
a micro-controller unit for controlling said vehicle occupant detection and notification system, said micro-controller unit being operable to monitor said micro-controller unit's inputs from multiple sensors within a vehicle and to provide output enabling signals to internal and external vehicle alarms;  
a door switch being mountable on the driver's door of said vehicle, a signal wire the output signal from said door switch being routable to an input one of said inputs of said micro-controller unit for indicating when said door is open;  
an inside temperature sensor, the output signal from said inside temperature sensor being routable to an additional input of said micro-controller unit for

Application/Control Number: 10/658,954(Younse) Art Unit: 2636

13

determining when the temperature inside said vehicle falls above or below a predetermined safe temperature range;

an internal vehicle alarm being mountable in said vehicle for reminding responsible occupants of said vehicle, when a child is in said child car seat and a door of said vehicle is open, that a child is in said child car seat, said internal vehicle alarm being enabled by an output signal from said micro-controller unit; and

a high-volume audible external vehicle alarm, said external vehicle alarm being enabled by an output of said micro-controller unit when a child is in said car seat and the inside temperature of said vehicle is outside of said predetermined safe temperate range, said external alarm being reset when said child is removed from said child car seat or manually; and

a wiring harness for routing signal wires from said seat cushion pressure switch means of said child car seat, said door switches, said inside temperature sensor, and vehicle's power and chassis ground to inputs of said micro-controller unit, said wiring harness further routing an output signal wire from and from said micro-controller unit outputs to said internal vehicle alarm and said high volume audible external alarm, said wiring harness wires having a mating connector means for coupling to said seat cushion pressure switch means and said micro-controller unit.

Application/Control Number: 10/658,954(Younse) Art Unit: 2636

14

5. (currently amended) The system of claim 4, wherein the door switches from all ~~one passenger~~ two or more doors of said vehicle are routed to separate inputs of said micro-controller unit, said micro-controller unit enabling said internal vehicle alarm when a child is in said car seat and any of said the monitored passenger doors are opened.
6. (canceled)
7. (canceled)
8. (original) The system of claim 4, wherein said internal vehicle alarm is a beeper or voice command type alarm.
9. (currently amended) The system of claim 4, wherein said micro-controller unit is an integral part of said child car seat.
10. (original) The system of claim 4, wherein a separate seat cushion with built-in pressure switch is retrofitted to an existing child car seat.

Application/Control Number: 10/658,954(Younse) Art Unit: 2636

15

11. (currently amended) The system of claim 4, wherein said wiring harness supplies signals from a plurality of child car seats to multiple inputs of said micro-controller.

12. (currently amended) A vehicle with a child detection and notification system ~~for use in combination with a child car seat, comprising:~~  
~~a vehicle;~~  
~~a child car seat being attached in a seat of said vehicle, said child car seat having a safety belt means for securing a child, said child car seat further having a built-in seat cushion with pressure switch means, said pressure switch means being enabled when a child occupies said child car seat;~~  
~~a controller unit for controlling said system, said controller unit being mounted in said vehicle, said controller unit determining when a child is in said child car seat and a passenger door of said vehicle is open;~~  
~~a micro-controller unit for controlling said vehicle occupant detection and notification system, said micro-controller unit being operable to monitor said micro-controller unit's inputs from multiple sensors within a vehicle and to provide output enabling signals to internal and external vehicle alarms;~~  
~~signals signal wires from at least the vehicle's two driver-side front passenger door switches routed to an inputs of said micro-controller unit for indicating when one or more doors are open;~~

Application/Control Number: 10/658,954(Younse) Art Unit: 2636

16

an inside temperature sensor, the output signal from said inside temperature sensor being routable to an additional input of said micro-controller unit for determining when the temperature inside said vehicle falls above or below a predetermined safe temperature range;

an internal vehicle alarm mounted in said vehicle for reminding responsible occupants of said vehicle, when a child is in said child car seat and a door of said vehicle is open, that a child is in said child car seat, said internal vehicle alarm being enabled by an output signal from said micro-controller unit; and a high-volume audible external vehicle alarm, said external vehicle alarm being enabled by an output of said micro-controller unit when a child is in said car seat and the inside temperature of said vehicle is outside of said predetermined safe temperate range, said external alarm being reset when said child is removed from said child car seat or manually; and

a wiring harness routing signal wires from said seat cushion pressure switch means of said child car seat, said door switches, said inside temperature sensor, and vehicle's power and chassis ground to inputs of said micro-controller unit, said wiring harness further routing an output signal wire from and from said micro-controller unit outputs to said internal vehicle alarm and said high volume audible external alarm, said wiring harness wires having a mating connector means for coupling to said micro-controller unit and to said seat cushion pressure switch means of one or more said child car seats.

Application/Control Number: 10/658,954(Younse) Art Unit: 2636

17

13. (currently amended) The vehicle of claim 12, wherein controller unit functions are provided by the micro-controller(s) of said vehicle's built-in electrical system.
14. (currently amended) The vehicle of claim 13, wherein said cable harness only routes a signal from said seat cushion with pressure switch means to said vehicle's micro-controller unit, all other system functions being integrated into said vehicle's existing electronic components.
15. (canceled)
16. (canceled)
17. (currently amended) The vehicle of claim 12-16, wherein said external vehicle alarm is said vehicle's existing security alarm.
18. (original) The vehicle of claim 12, wherein said internal vehicle alarm is said vehicle's beeper normally used to indicate that the lights are on or that the keys are in the ignition.

Application/Control Number: 10/658,954(Younse) Art Unit 2636

18

19. (original) The vehicle of claim 12, wherein a separate seat cushion with pressure switch means is retrofitted into an existing child car seat.
20. (currently amended) The vehicle of claim 12, wherein said micro-controller unit is an integral part of said child car seat.
21. (new) The assembly of claim 1, wherein the output signals from one or more vehicle doors are coupled to additional inputs of said micro-controller unit for determining when a door is open indicating that the vehicle is about to be exited while a child is in said child car seat.
22. (new) The assembly of claim 1, wherein the output signal from a temperature sensor inside said vehicle is coupled to an additional input of said micro-controller unit for determining when the temperature inside said vehicle falls above or below a predetermined safe temperature range.
23. (new) The assembly of claim 1, wherein said output internal and external vehicle alarms consists of: a beeper, a voice command, a horn, and a security alarm.

Application/Control Number: 10/658,954(Younse) Art Unit: 2636

19

24. (new) The assembly of claim 1, wherein said micro-controller unit controls the operational functions of said vehicle occupant detection and notification system, said operational functions further comprising:  
enabling said system in a vehicle when a child occupies said child car seat;  
initializing said system once responsible occupants are in said vehicle and all doors are closed;  
detecting when a door of said vehicle is opened and providing an alarm or voice message stating that a child is in said child car seat;  
inhibiting said system if said child is removed from said child car seat;  
sensing the internal temperature inside said vehicle if said child is left in said child car seat inside said vehicle;  
sounding an external alarm until someone comes to the aid of said child when vehicle inside temperature reaches an unsafe temperature; and  
resetting said system when said child is safely removed from said vehicle.
25. (new) The system of claim 4, wherein said micro-controller unit controls the operational functions of said vehicle occupant detection and notification system, said operational functions further comprising:  
enabling said system in a vehicle when a child occupies said child car seat;  
initializing said system once responsible occupants are in said vehicle and all doors are closed;

Application/Control Number: 10/658,954(Younse) Art Unit: 2636

20

detecting when a door of said vehicle is opened and providing an alarm or voice message stating that said child is in said child car seat; inhibiting said system if said child is removed from said child car seat; sensing the internal temperature inside said vehicle if said child is left in said child car seat inside said vehicle; sounding an external alarm until someone comes to the aid of said child when vehicle inside temperature reaches an unsafe temperature; and resetting said system when said child is safely removed from said vehicle.

26. (new) The vehicle of claim 12, wherein said micro-controller unit controls the operational functions of said vehicle occupant detection and notification system, said operational functions further comprising:  
enabling said system in a vehicle when a child occupies said child car seat; initializing said system once responsible occupants are in said vehicle and all doors are closed;  
detecting when a door of said vehicle is opened and providing an alarm or voice message stating that said child is in said child car seat; inhibiting said system if said child is removed from said child car seat; sensing the internal temperature inside said vehicle if said child is left in said child car seat inside said vehicle;

Application/Control Number: 10/658,954(Younse) Art Unit: 2636

21

sounding an external alarm until someone comes to the aid of said child when vehicle inside temperature reaches an unsafe temperature; and resetting said system when said child is safely removed from said vehicle.